RE-AMENDED CLAIMS IN SERIAL NO. 07/770,414

1. (Twice Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

a source functional to provide an AC voltage between a first and a second source terminal;

capacitor means having a first and a second capacitor terminal; the first capacitor terminal being connected with the second source terminal;

gas discharge lamp having a first and a second lamp terminal disconnectably connected with the first source terminal and the second capacitor terminal, respectively; and

rectifier means connected between the first source terminal and the second capacitor terminal; the rectifier means being operative, whenever the lamp is either not connected or not drawing any significant amount of current, to cause a DC voltage to exist between the first source terminal and the second capacitor terminal; the peak magnitude of the DC voltage being about equal to the peak-to-peak magnitude of the AC voltage; the rectifier means being further characterized by causing, whenever the lamp is connected and drawing a significant amoint of current, an alternating voltage of substantive magnitude to exist between the first source terminal and the second capacitor terminal.

2. The arrangement of claim 1 wherein the rectifier means includes a resistor means.

3. The arrangement of claim 1 wherein, after lamp ignition, the magnitude of the DC voltage is negligible in comparison with the RMS magnitude of the AC voltage.

4. The arrangement of claim 1 wherein the frequeny of the AC voltage is substantially higher than 60 Hz.

5. The arrangement of claim 1 wherein the gas discharge lamp means includes a fluorescent lamp having thermionic cathodes.

6. The Arrangement of claim 5 wherein the source includes means operative to provide a cathode heating voltage to at least one of the thermionic cathodes.

7. (Twice Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

a source providing an AC voltage at a pair of AC terminals;

gas discharge lamp means having a pair of lamp terminals; and

lamp starting and operating means connected between the AC terminals and the lamp terminals; the lamp starting and operating means being operative: (i) prior to lamp ignition, to cause an ignition voltage to exist between the lamp terminals, the ignition voltage being the sum of the AC voltage and a DC voltage, the AC voltage having a first magnitude; the DC voltage having a second magnitude; and (ii) after lamp ignition, to cause the second magnitude to be substantially reduced compared with the first magnitude; the lamp starting and operating means being further characterized by causing, after lamp ignition, an alternating current to flow between the lamp terminals.

8. The arrangement of claim 7 wherein, after lamp ignition, the second magnitude is negligible.

9. The arrangement of claim 7 wherein, prior to lamp ignition, the second magnitude is about equal to the peak magnitude of the AC voltage.

10. The arrangement of claim 7 wherein, prior to lamp ignition, the peak magnitude of the ignition voltage is about equal to the peak-to-peak magnitude of the AC voltage.

11. (Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

a source providing an AC voltage at a pair of AC terminals;

gas discharge lamp means having a pair of lamp terminals; and

lamp starting and operating means connected between the AC terminals and the lamp termimals; the lamp starting and operating means being operative, prior to lamp ignition, to cause a DC voltage in addition to the AC voltage to exist between the lamp terminals;

the arrangement being so constituted that, after lamp ignition, the current flowing through the lamp is an alternating current, substantially void of any DC component.

12. The arrangement of claim 11 wherein the lamp starting and operating means includes a diode means connected between the lamp terminals.

13. The arrangement of claim 11 wherein the lamp starting and operating means includes a capacitor.

14. (Twice Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

a source functional to provide an AC voltage between a first and a second source terminal;

capacitor means having a first and a second capacitor terminal; the first capacitor terminal being connected with the second source terminal;

gas discharge lamp having a first and a second lamp terminal disconnectably connected with the first source terminal and the second capacitor terminal, respectively; and

a DC supply means connected in circuit between the first source terminal and the second capacitor terminal; the DC supply means being operative to cause a unidirectional voltage to exist between the first source terminal and the second capacitor terminal whenever the lamp is either not connected or not drawing any significant amount of current; the magnitude of the DC voltage being about equal to or larger than half of the peak voltage of the AC voltage;

the arrangement being so constituted that, after lamp ignition, the current flowing through the lamp is an alternating current substantially void of DC.

15. (Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

a source functional to provide an AC voltage between a first and a second source terminal; there being substantially no galvanic connection between the first source terminal and earth ground; there being substantial galvanic connection between the second source terminal and earth ground;

capacitor means having a first and a second capacitor terminal; the first capacitor terminal being connected with the second source terminal; and

gas discharge lamp having a first and a second lamp terminal disconnectably connected with the first source terminal and the second capacitor terminal, respectively;

whereby neither the first source terminal nor the second capacitor terminal exhibits galvanic connection with earth ground.

16. The arrangement of claim 15 wherein the frequency of the AC voltage is larger by at least two orders of magnitude compared with the frequency of the power line voltage normally present at an ordinary electric utility power line.

17. The arrangement of claim 15 wherein: (i) the source is connected in circuit with an ordinary electric utility power line; and (ii) current of frequency about equal to that of the voltage present on the power line is substantially prevented from flowing between earth ground and the first source terminal as well as between earth ground and the second capacitor terminals.

18. The arrangement of claim 15 wherein, prior to lamp ignition: (i) an ignition voltage exists between the lamp terminals; and (ii) the ignition voltage includes a substantial component of DC voltage.

19. (Twice Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

a source operative to provide an AC voltage between a first and a second source terminal;

capacitor means having a first and a second capacitor terminal; the first capacitor terminal being connected with the second source terminal;

gas discharge lamp having a first and a second lamp terminal disconnectably connected with the first source terminal and the second capacitor terminal, respectively; and

lamp starting aid means connected in circuit between the first source terminal and the second capacitor terminal; the starting aid means being operative, prior to lamp ignition, to cause a lamp starting voltage to exist between the lamp terminals; the lamp starting voltage being the sum of the AC voltage and a DC voltage component;

the power supply arrangement being characterized by causing, after lamp ignition, an alternating current to flow through the gas discharge lamp.

20. The arrangement of claim 19 wherein the source includes an inverter means connected with a DC power supply means.

21. (Amended) A[n] power supply arrangement for a gas discharge lamp, comprising:

DC power supply means operative to provide a DC voltage at a pair of DC terminals;

inverter means connected with the DC terminals and operative to provide an AC voltage between a pair of AC terminals;

gas discharge lamp having a pair of lamp terminals; and

circuit means connected between the AC terminals and the lamp terminals; the circuit means being operative to cause a lamp current to flow through the lamp means;

the arrangement being operative to cause the RMS magnitude of the AC voltage to be higher after lamp ignition compared with before lamp ignition.